

**Notice of Allowability**

Application No.

10/724,376

Examiner

Qutub Ghulamali

Applicant(s)

LIANG, JIE

Art Unit

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 04/26/2007.
2. ☒ The allowed claim(s) is/are 1,2 and 4-13.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 4/26/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is responsive to Amendments/Remarks filed on 04/26/2007.
2. Applicant's amendment to the drawing figure 3 and specification section 0014 (page 3) and section 0039 (page 4) is acknowledged and accepted.
3. The declaration submitted by the applicant to establish conception is acknowledged.

### **Response to Remarks/Amendment**

4. In order to advance prosecution in the case, an examiner's amendment is considered necessary so as to correct for some minor deficiency in the claims filed 04/11/2007. Examiner's amendment follows.

### **EXAMINER'S AMENDMENT**

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Steven A. Shaw on 5/2/2007.

The application has been amended as follows:

**IN THE CLAIMS:**

Claim 1, line 12, after "the duration of the", -- preamble of each -- has been inserted.

Claim 1, last line, after "plurality of stored channel estimator" -- values -- has been inserted.

Claim 2, line 1, ".2." has been replaced with -- 2. --.

Claim 5, line 7, after "equalizer for the detected" -- transmitted -- has been inserted.

Claim 5, last line, -- a -- has been inserted at the beginning of "store for storing".

Claim 5, last line, "estimated value" has been replaced with -- channel estimated values --.

Claim 6, line 3, "whole data portion" has been replaced with -- duration --.

Claim 7, line 2, "error" has been replaced with -- errors --.

Claim 13, line 1, ",", after 13 has been replaced with a -- . --.

**Reason For Allowance**

6. Claims 1-2, 4-13 allowed.

7. The following is an examiner's statement of reasons for allowance: The prior art in combination with other claimed limitations neither teaches nor renders obvious a method of conserving power in a WLAN receiver having a module for channel estimation only and a module for pilot processing only of a plurality of packets comprising: enabling said channel estimation module only during a preamble of each packet; enabling pilot processing module for the duration of the preamble of each

packet after the preamble of each packet using said plurality of stored channel estimator values. Such limitations as recited in independent claims 1 and 5 is neither anticipated nor rendered obvious by the prior art of record.

8. Claims 2, 4, 6-13 are allowed by virtue of their dependency to claims noted above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Contact Information***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### **US Patents:**

US Patent (6,847,678) to Berezdivin et al.

US Pub. (2006/0193277) to Keaney et al.

US Patent (6,922,549) to Lyons et al.

US Patent (7,151,759) to Ryan et al.

US Pub. (2004/0202133), to Filipovic.

US Pub. (2004/0072588), to Beach et al.

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**Publications:**

Jin-Jun Xiao; Shuguang Cui; Zhi-Quan Luo; Goldsmith, A.J.; "Joint estimation in sensor networks under energy constraints", IEEE, Communications Society Conference on Communications and Networks 4-7 Oct. 2004 Page(s) 264 – 271.

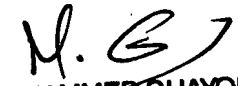
Che-Shen Yeh and Yinyi Lin, "Channel Estimation using Pilot Tones in OFDM Systems", IEEE, Transactions on Broadcasting, Vol. 45, No. 4, December 1999, pages 100-409.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.  
May 2, 2007.

  
**MOHAMMED GHAYOUR**  
**SUPERVISORY PATENT EXAMINER**